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TECH CENTER 1600 PGGO 1 OF 17 ATTY. DOCKET NO. APPLICATION NO. 1390.0070006/JAG/BJD 10/055,430 FORM PTO-1449 APPLICANT Rangel-Aldao et al. INFORMATION DISCLOSURE STATEMENT GROUP FILING DATE January 25, 2002 To Be Assigned U.S. PATENT DOCUMENTS EXAMINER DOCUMENT NUMBER INITIAL DATE NAME CLASS sub-FILING DATE CLASS AA1 3,130,055 04/21/1964 Segel, et al. 99 48 10/30/1962 AB1 3,733,205 05/15/1973 99 Shovers, et al. 48 08/07/1970 AC1 3,770,453 11/06/1973 426 227 Dadic et al. 04/22/1971 AD1 4,110,480 08/29/1978 Pollock et al. 426 436 07/23/1975 AE1 4,387,162 06/07/1983 Aigle et al. 435 172 11/14/1979 AF1 4,414,334 11/08/1983 Hitzman 435 262 08/07/1981 AG1 4,708,875 11/24/1987 Godtfredsen, et al. 426 12 03/15/1982 4,790,993 12/13/1988 AH1 Schedl et al. 426 13 02/13/1987 AI1 4,867,990 09/19/1989 Suwa et al. 426 8 08/16/1988 AJ1 4,911,936 03/27/1990 Kijima et al. 426 62 03/18/1988 CES AK1 4,957,749 09/18/1990 Prieels et al. 426 10 05/14/1986 FOREIGN PATENT DOCUMENTS EXAMINER DOCUMENT NUMBER DATE COUNTRY CLASS SUB-TRANSLATION CLASS Yes AL1 GB 5673 02/21/1891 Great Britain No Yes AM1 EP 0 207 039 A1 12/30/1986 Europe No Yes AN1 JP 2-46285 02/15/1990 Japan No Yes A01 JP 3-65173 03/20/1991 Japan No Yes EP 0 547 876 A1 06/23/1993 Europe OTHER (Including Author, Title, Date, Pertinent Pages, etc.) Abramovitz, A.S., and Massey, V., "Purification of Intact Old Yellow Enzyme Using CES an Affinity Matrix for the Sole Chromatographic Step, " J. Biol. Chem. 251:5321-AR 1 5326, American Society of Biological Chemists, Inc. (1976). Amore, R., et al., "Cloning and expression in Saccharomyces cerevisiae of the NAD(P)H-dependent xylose reductase-encoding gene (XYL1) from the xylose-AS assimilating yeast Pichia stipitis," Gene 109:89-97, Elsevier Science B.V. (1991). CES Baker, D.L., and Stollberg, H., "The Relation between Yeast Strain and Flavor ΑТ 1 Stability of Beer," The Brewers Digest 34:46-47, Siebel Publishing Co. (1959).

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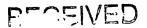
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	AE2	5,46	50,836	10/24/1995	Ono et al.	426		11		08/04/1	993
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Bravo, A., et al., "Use of HPLC and CE to detect chemical indices of beer aging," IBTC Technical Constitum Meeting #36, Caracas, Venezuela, unpublished abstract of poster presentation (1994).											
Bravo, A., et al., "63. Highly sensitive chemical indices of beer aging," in: Proceedings of the 28th EBC Congress Budapest 2001 on CD-ROM, Fachverlag Hans Carl, Nürnberg, Germany, pp. 1-10 (May 2001).											
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Grönqvist, A., et al., "Carbonyl compounds during beer production and in beer," AS <u>5</u> Proc. Cong. Eur. Brew. Conv. 24:421-428, Oxford University Press (1993).

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Gupta, K.G., et al., "Removal of Diacetyl from Beer by Adsorbants and Diacetyl Reductase, " Biotech. & Bioengin. 21:649-657, John Wiley & Sons, Inc. (1979).

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ΑP OTHER (Including Author, Title, Date, Pertinent Pages, etc.) Rangel-Aldao, R., "Biotechnology for a better beer?" Nature Biotechnol. 14:1540-AR CES 1541, Nature Publishing Co. (November 1996). Rangel-Aldao, R., et al., "61. A new technology for beer flavor stabilization: control of key intermediates of the Maillard reaction," in: Proceedings of the AS <u>12</u> 28th EBC Congress Budapest 2001 on CD-ROM, Fachverlag Hans Carl, Nürnberg, Germany, pp. 1-10 (May 2001). Rangel-Aldao, R., et al., "Beer Flavor Stabilization Through the Control of Maillard Reaction Intermediates," in: Monograph 31: Flavor and Flavor Stability AT <u>12</u>

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	Sánchez, B., et al., "48. Brewers' yeast oxidoreductase with activity on Maillard reaction intermediates of beer," in: Proceedings of the 28th EBC Congress Budapest 2001 on CD-ROM, Fachverlag Hans Carl, Nürnberg, Germany, pp. 1-9 (May 2001).												
CES	АТ	13 F	family of r	, K., et al., "Old Yellow Enzyme. The Discovery of Multiple Isozymes and a y of related Proteins," <i>J. Biol. Chem. 268</i> :6097-6106, American Society for emistry and Molecular Biology, Inc. (1993).									
EXAMINER	C	Sher	rer					DATE	CONSI	DERED	7/0	2/04	

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INFORMATION DISCLOSURE STATEMENT

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	AS	14	Vehkomāki, ML., et al., "47. Development of brewers' yeast with increased carbonyl reducing activity," in: Proceedings of the 28 th EBC Congress Budapest 2001 on CD-ROM, Fachverlag Hans Carl, Nūrnberg, Germany, pp. 1-10 (May 2001).							
CES	АТ	14	Recombinant	t DNA, Second	Using Yeast to St Edition, Watson, ork, pp. 235-253 (J.D., et al	ic Gene	: Function ., Scienti	," in: fic American	
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APPLICATION NO. ATTY. DOCKET NO. 1390.0070006/JAG/BJD 10/055,430

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